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Rainer Jormanainen

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WARE FRESSOLA VAN DER SLUYS &  
ADOLPHSON, LLP  
BRADFORD GREEN, BUILDING 5  
755 MAIN STREET, P O BOX 224  
MONROE, CT 06468

EXAMINER

DUONG, FRANK

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/090,424

Applicant(s)

JORMANAINEN ET AL.

Examiner

Frank Duong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/1/02 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is a response to communications dated 01/13/06. Claims 1-28 are pending in the application.

#### ***Claim Objections***

2. Claims 16-17 are objected to because of the following informalities:

As per claim 16, line 2, the term "adapted to" should be changed to --configured to--.

As per claim 17, line 3, the term "adapted to" should be changed to --configured to--.

A typical reason for doing so is that such term or claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. See MPEP § 2111.049 [R.3].

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11, 13-18, 21-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by McTiffin (EP 0,679,042).

Regarding **claim 1**, in accordance with McTiffin reference entirety, McTiffin discloses method for performing switching between an incoming side and an outgoing side of a switching network element (*Fig. 4*) in a telecommunication network (*Fig. 3*), said method comprising the steps of:

a) allocating technology-independent identifications (*unique VCI and VPI*) to a call resource of said switching network element (*MNIU*), request by a received call (*col. 3, lines 22-24 and thereafter*);

b) defining an incoming logical leg (*VPI<sub>A</sub>/VCIX or VPI<sub>B</sub>/VCIX*) and an outgoing logical leg (*VPI<sub>P</sub>/VCIQ*) for said received call by using said allocated identifications for said incoming side and said outgoing side, respectively (*col. 3, lines 30-37 or col. 4, lines 26-58 and thereafter*), and

c) controlling said switching network element for said received call based on said incoming logical leg and said outgoing logical leg (*col. 4, lines 31-34, the functions of circuit 22 is discussed*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein said call resources **comprise at least one of** a transcoding service, a **macro diversity combining service**, an AAL2 switching service, a tone generating service, an echo canceling service, a compression service and a conference call service (*col. 4, line 49 and thereafter*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein a plurality of incoming logical legs

( $VPI_A/VCIX$  and  $VPI_B/VCIX$ ) are simultaneously defined for a through connection to an outgoing logical leg ( $VPI_P/VCIQ$ ) (see Fig. 4).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein said incoming logical leg and/or said outgoing logical leg comprise a plurality of subconnections needed for a whole through-connection between said incoming side and said outgoing side (see Fig. 4 for connection details of incoming and outgoing logical connections).

Regarding **claim 5**, in addition to features recited in base claim 4 (see rationales discussed above), McTiffin further discloses wherein said plurality of subconnections depend on services requested by said received call (col. 3, lines 22-24 and thereafter).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein a reservation of service resources and a cross-connection handling between service points is controlled on the basis of said incoming and outgoing logical legs (subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), McTiffin further discloses wherein resources are reserved with the same traffic parameters as reserved for a previous service in a service chain of a logical leg (see Fig. 6 and its corresponding description at col. 6, line 42 to col. 7, line 46).

Regarding **claim 8**, in addition to features recited in base claim 4 (see rationales discussed above), McTiffin further discloses wherein said plurality of subconnections

comprise an AAL2 connection and/or an ATM connection (*Fig. 4 or 6 depicted ATM connection (VPI/VCI)*).

Regarding **claim 9**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein a signal processing resource for providing service functions is managed based on said incoming and outgoing logical legs (*Fig. 4; ATM switch 14 or 15*).

Regarding **claim 10**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein data of said incoming and outgoing logical legs is stored in a memory (*Fig. 4; buffers 18 and 20*).

Regarding **claim 11**, in addition to features recited in base claim 10 (see rationales discussed above), McTiffin further discloses wherein a leg identification information is permanently stored and a leg is created in a start-up phase according to the defined services (*col. 3, lines 38-46*).

Regarding **claim 13**, in addition to features recited in base claim 10 (see rationales discussed above), McTiffin further discloses wherein said incoming and outgoing logical legs are refreshed based on a refresh request (*col. 7, lines 18-30*).

Regarding **claim 14**, in accordance with McTiffin reference entirety, McTiffin shows switching network element (*Fig. 4*) for performing switching between an incoming side (*Fig. 4; From Access Network*) thereof and an outgoing side (*Fig. 4; To Fixed Network*) thereof in a telecommunication network (*Fig. 3*), said switching network element (*Fig. 4*) comprising:

a) logical resource interface means (*MNIU*) for allocating a technology-independent identification (*unique VCI and VPI*) to a call resource requested by a received call (*col. 3, lines 22-24 and thereafter*); and

b) control means (*ATM switch 14 and 16*) for controlling a switching operation of said switching network element on the basis of an incoming logical leg (*VPI<sub>A</sub>/VCIX or VPI<sub>B</sub>/VCIX*) and an outgoing logical leg (*VPI<sub>A</sub>/VCIQ*) defined by the identifications allocated by said logical resource interface means to requested cell resources at said incoming side and said outgoing side, respectively (*col. 3, lines 30-37 or col. 4, lines 26-58 and thereafter*).

Regarding **claim 15**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further shows memory means (*Fig. 4; buffer pair 18 and 20*) for storing data of said incoming and outgoing logical legs (*col. 4, lines 29-31*).

Regarding **claim 16**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said control means are configured to mark and store a registration information of a leg to a client who created the leg (*col. 3, lines 10-13*).

Regarding **claim 17**, in addition to features recited in base claim 16 (see rationales discussed above), McTiffin further discloses wherein said control means is configured to perform control such that only the registered owner of a leg is allowed to request operations concerning this particular leg (*col. 3, lines 10-13*).

Regarding **claim 18**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses connection control means for controlling a switching means in response to an output of said control means (*not shown; inherently there is some sort of controlling mechanism or connection control (CAC) in an ATM switch (14 and 16)*).

Regarding **claim 21**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses further comprising signal processing control means for controlling an allocation of signal processing resources to service functions based on an output of said control means (*Fig. 4; ATM switch 14 or 15*).

Regarding **claim 22**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said service functions comprise **at least one of** transcoding, tone generation, echo canceling, compression, announcements, conference call services and ***macro diversity combining services*** (*col. 4, line 49 and thereafter*).

Regarding **claim 23**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said control means is arranged to determine necessary subconnection end points based on services required for said incoming and outgoing side according to said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).



Regarding **claim 24**, in addition to features recited in base claim 19 (see rationales discussed above), McTiffin further discloses wherein said ATM connection control means is arranged to supply subconnection end points to said control means based on requested services required for said incoming and outgoing side according to said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).

Regarding **claim 25**, in addition to features recited in base claim 21 (see rationales discussed above), McTiffin further discloses wherein said control means is arranged to use said signal processing resource control means in order to request service end points for transcoding **or macro diversity services** needed for said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).

Regarding **claim 26**, in addition to features recited in base claim 21 (see rationales discussed above), McTiffin further discloses wherein said processing resource control means is arranged to reserve resources with same traffic parameters as were received for a previous service in the service chain of a logical leg (see *Fig. 6 and its corresponding description at col. 6, line 42 to col. 7, line 46*).

Regarding **claim 28**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said switching element is a radio network controller or an interworking network element of a third generation mobile network (*Fig. 4*).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12, 19-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McTiffin in view of Boldt et al (Modeling an ATM-Based Access Network for 3<sup>rd</sup> Generation Mobile Communication Networks, IEEE, pages 2590-2593, 1998) (hereinafter "Boldt").

In addition to features recited in base claims 1 and 14, McTiffin fails to further disclose the applying of AAL2 service or AAL2 connection control means. However, such limitation lacks thereof from McTiffin's teaching is well known and disclosed by Boldt.

In an analogous art, Boldt teaches an ATM switch extended to AAL2 switching (Figure 5 or 8), comprising, among other things, the limitation of applying of AAL2 service or AAL2 connection control means (*page 2593, left column, address mapping between AAL2 channel identifier and ATM VCI/VPis*) to achieve higher efficiency as well as coping with delay sensitive services (*Boldt, page 2590, right column, second paragraph*).

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement Boldt's teaching into McTiffin's method and system to arrive the

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claimed invention with a motivation to achieve higher efficiency as well as coping with delay sensitive services (*Boldt, page 2590, right column, second paragraph*).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Frank Duong', with a stylized, flowing script.

**FRANK DUONG**  
**PRIMARY EXAMINER**

July 5, 2006